

## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

### Listing of Claims:

- 1           1.       (Currently amended) A method for implementing a sleep proxy,  
2       comprising:  
3           receiving a request at the sleep proxy for information pertaining to a  
4       service provided by a device;  
5       determining if the device is a ~~member of a list of devices~~device for which  
6       the sleep proxy answers;  
7           if so, determining if the request is a request for which the sleep proxy can  
8       answer; and  
9           if so, sending a response to the request on behalf of the device.
- 1           2.       (Original) The method of claim 1, wherein if the request is not a  
2       request for which the sleep proxy can answer, the method further comprises  
3       sending a wakeup packet to the device, wherein the wakeup packet is a packet that  
4       causes the device to exit a power-saving mode.
- 1           3.       (Original) The method of claim 1, wherein prior to receiving the  
2       request, the method further comprises:  
3           receiving a registration request from the device, wherein the registration  
4       request contains:  
5                       sufficient information to allow the sleep proxy to generate a  
6                       wakeup packet that can wake up the device, and

7 a list of requests for which the sleep proxy can answer; and  
8 adding the device to the list of devices for which the sleep proxy answers.

1 4. (Original) The method of claim 3, wherein the registration  
2 additionally contains a lease expiration time, wherein upon reaching the lease  
3 expiration time, the sleep proxy cancels the device registration.

1 5. (Original) The method of claim 4, wherein an internal timer in the  
2 device wakes up the device so that the device can renew its registration with the  
3 sleep proxy before the registration expires.

1 6. (Original) The method of claim 1, further comprising:  
2 receiving a notification from the device that the device is entering a  
3 power-saving state; and  
4 in response to the notification, configuring the sleep proxy to answer for  
5 the device.

1 7. (Original) The method of claim 1, further comprising:  
2 receiving a notification from the device that the device has exited a power-  
3 saving state; and  
4 in response to the notification, configuring the sleep proxy not to answer  
5 for the device.

1 8. (Original) The method of claim 1, further comprising  
2 implementing a second sleep proxy that duplicates the functionality of the sleep  
3 proxy for fault-tolerance purposes.

1           9.       (Original) The method of claim 1, wherein sending a response to  
2 the request further comprises waiting a random period of time prior to sending the  
3 response, wherein waiting the random period of time facilitates duplicate answer  
4 suppression between sleep proxies.

1           10.      (Currently amended) A computer-readable storage medium storing  
2 instructions that when executed by a computer cause the computer to perform a  
3 method for implementing a sleep proxy, the method comprising:  
4           receiving a request at the sleep proxy for information pertaining to a  
5 service provided by a device;  
6           determining if the device is a ~~member of a list of devices~~ device for which  
7 the sleep proxy answers;  
8           if so, determining if the request is a request for which the sleep proxy can  
9 answer; and  
10          if so, sending a response to the request on behalf of the device.

1           11.      (Original) The computer-readable storage medium of claim 10,  
2 wherein if the request is not a request for which the sleep proxy can answer, the  
3 method further comprises sending a wakeup packet to the device, wherein the  
4 wakeup packet is a packet that causes the device to exit a power-saving mode.

1           12.      (Original) The computer-readable storage medium of claim 10,  
2 wherein prior to receiving the request, the method further comprises:  
3           receiving a registration request from the device, wherein the registration  
4 request contains:  
5                       sufficient information to allow the sleep proxy to generate a  
6                       wakeup packet that can wake up the device, and  
7                       a list of requests for which the sleep proxy can answer; and

8 adding the device to the list of devices for which the sleep proxy answers.

1 13. (Original) The computer-readable storage medium of claim 12,  
2 wherein the registration additionally contains a lease expiration time, wherein  
3 upon reaching the lease expiration time, the sleep proxy cancels the device  
4 registration.

1 14. (Original) The computer-readable storage medium of claim 13,  
2 wherein an internal timer in the device wakes up the device so that the device can  
3 renew its registration with the sleep proxy before the registration expires.

1 15. (Original) The computer-readable storage medium of claim 10,  
2 wherein the method further comprises:  
3 receiving a notification from the device that the device is entering a  
4 power-saving state; and  
5 in response to the notification, configuring the sleep proxy to answer for  
6 the device.

1 16. (Original) The computer-readable storage medium of claim 10,  
2 wherein the method further comprises:  
3 receiving a notification from the device that the device has exited a power-  
4 saving state; and  
5 in response to the notification, configuring the sleep proxy not to answer  
6 for the device.

1 17. (Original) The computer-readable storage medium of claim 10,  
2 wherein the method further comprises implementing a second sleep proxy that  
3 duplicates the functionality of the sleep proxy for fault-tolerance purposes.

1           18.     (Original) The computer-readable storage medium of claim 10,  
2 wherein sending a response to the request further comprises waiting a random  
3 period of time prior to sending the response, wherein waiting the random period  
4 of time facilitates duplicate answer suppression between sleep proxies.

1           19.     (Currently amended) An apparatus that implements a sleep proxy,  
2 comprising:  
3           a receiving mechanism configured to receive a request at the sleep proxy  
4 for information pertaining to a service provided by a device;  
5           a determination mechanism configured to determine if the device is a  
6 ~~member of a list of devices~~ device for which the sleep proxy answers;  
7           a second determination mechanism configured to determine if the request  
8 is a request for which the sleep proxy can answer if the device is a member of the  
9 list of devices for which the sleep proxy answers; and  
10          a response mechanism configured to send a response to the request on  
11 behalf of the device if the request is a request for which the sleep proxy can  
12 answer.

1           20.     (Original) The apparatus of claim 19, wherein if the request is not a  
2 request for which the sleep proxy can answer, the apparatus further comprises a  
3 wakeup mechanism configured to send a wakeup packet to the device that causes  
4 the device to exit a power-saving mode.

1           21.     (Original) The apparatus of claim 19, further comprising:  
2           a registration mechanism configured to receive a registration request from  
3 the device, wherein the registration request contains:

4                   sufficient information to allow the sleep proxy to generate a  
5                   wakeup packet that can wake up the device, and  
6                   a list of requests for which the sleep proxy can answer; and  
7                   a list addition mechanism configured to add the device to the list of  
8                   devices for which the sleep proxy answers.

1           22.     (Original) The apparatus of claim 21, wherein the registration  
2           additionally contains a lease expiration time, and wherein the apparatus further  
3           comprises a cancellation mechanism that is configured to cancel the device  
4           registration upon reaching the lease expiration time.

1           23.     (Original) The apparatus of claim 22, wherein an internal timer in  
2           the device wakes up the device so that the device can renew its registration with  
3           the sleep proxy before the registration expires.

1           24.     (Original) The apparatus of claim 19, further comprising:  
2           a notification mechanism configured to receive a notification from the  
3           device that the device is entering a power-saving state; and  
4           a configuration mechanism configured to configure the sleep proxy to  
5           answer for the device in response to the notification.

1           25.     (Original) The apparatus of claim 19, further comprising:  
2           a notification mechanism configured to receive a notification from the  
3           device that the device has exited a power-saving state; and  
4           a configuration mechanism configured to configure the sleep proxy not to  
5           answer for the device in response to the notification.

1           26.     (Original) The apparatus of claim 19, further comprising a second  
2     sleep proxy that duplicates the functionality of the sleep proxy for fault-tolerance  
3     purposes.

1           27.     (Original) The apparatus of claim 19, wherein the response  
2     mechanism is further configured to wait a random period of time prior to sending  
3     the response, wherein waiting the random period of time facilitates duplicate  
4     answer suppression between sleep proxies.